REMARKS/ARGUMENTS

Applicant thanks the Examiner for his careful review of this application. Claims 21-23 and 43-45 have been rejected. Claims 40-42 have been withdrawn by the Examiner. Claims 46-47 have been added and are fully supported by the specification. Applicant has carefully reviewed the prior art of record and believe that the newly added claims are patentable. Applicant respectfully requests reconsideration of the application in view of the above amendments and the following remarks submitted in support thereof.

Withdraw of Claims 40-42 from Consideration

The Examiner has withdrawn claims 40-42 from consideration because "the elected invention 11 and 11B does not include a ground reference in the second windings" (see office action mailed March 24, 2006 at page 2). Applicant respectfully traverses the Examiner's assertion of Figures 11 and 11B in support of the decision to withdraw claims 40-42. In particular, the abstract discloses that "[t]he amplifiers have a power modulator comprising ground-referenced switches ..." Therefore, "FIG. 11B is a schematic illustrating yet another isolated switching amplifier using four ground references MOSFETs and two isolated transformers" (paragraph 23). Accordingly, as defined in claim 40, the bi-directional switches connected to the secondary windings of the first and second power-transferring transformers share a ground reference. The Applicant submits that the Examiner's withdraw of claims 40-42 was in error, and requests that the Examiner reinstate claims 40-42 for consideration.

Anticipation Rejection under 35 U.S.C. §102(e)

The Examiner has rejected claims 21-23 and 43-45 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,646,548 to Dornfeld. For the reasons explained below, Dornfeld does not disclose each and every feature specified in independent claim 21.

Independent claim 21 defines a high efficiency amplifier. The high efficiency amplifier comprises a first transformer-isolated switching power converter and a second transformer-isolated switching power converter. Furthermore, the high efficiency amplifier comprises a pulse-width modulation controller for controlling the operation of bi-directional switches of the first and second transformer-isolated switching power converters in such a manner that when the first transformer-isolated switching power converter is active during the positive portion of the reference input signal, the bi-directional switches of the second isolated switching power converter provide a return path for the first transformer-isolated switching power converter's current to and from the loudspeaker. Similarly, when the second transformer-isolated switching power converter is active during the negative portion of the reference input signal, the bi-directional switches of the first transformer-isolated switching power converter provide a return path for the second transformer-isolated switching power converter's current to and from the loudspeaker.

In support of the 35 U.S.C. §102(e) rejection, the Examiner asserts that Dornfeld teaches that "both the first and second switching power converter can provide a return path for the first and second transformer isolated converters current to and from the loudspeaker" (see office action mailed March 24, 2006 at page 3). Applicant respectfully traverses the Examiner's characterization of Dornfeld relative to independent claim 21 because the portion of the reference relied upon by the Examiner (Figure 8) does not teach the bi-directional switches of the

second isolated switching power converter providing a return path for the first transformer-isolated switching power converter's current to and from the loudspeaker when the first transformer-isolated switching power converter is active and does not teach the bi-directional switches of the first transformer-isolated switching power converter providing a return path for the second transformer-isolated switching power converter's current to and from the loudspeaker when the second transformer-isolated switching power converter is active.

Specifically, Dornfeld discloses that the audio amplifier of Figure 8 is a conventional class D amplifier having "an H bridge arrangement of four MOSFETs Q1, Q4, Q9, and Q11" with "diagonally opposed pairs of MOSFETs, i.e., Q1 and Q11, Q4 and Q9" (column 10, lines 29-34). As disclosed in column 10, lines 37-40, "[e]ach diagonally opposed MOSFET pair are simultaneously turned on and off in a pattern corresponding to the amplified width modulated square wave output." Therefore, according to Dornfeld, when a MOSFET pair is turned on, the other diagonally opposed MOSFET pair is simultaneously turned off. However, if the other diagonally opposed MOSFET pair is turned off, then such MOSFET pair cannot provide a return path for the other MOSFET pair's current because the MOSFETs are turned off. In contrast, independent claim 21 defines the bi-directional switches of the second isolated switching power converter providing a return path for the first transformer-isolated switching power converter's current to and from the loudspeaker when the first transformer-isolated switching power converter is active and defines the bi-directional switches of the first transformer-isolated switching power converter providing a return path for the second transformer-isolated switching power converter's current to and from the loudspeaker when the second transformer-isolated switching power converter is active. As Dornfeld discloses that the diagonally opposed

MOSFET pair is simultaneously turned off, Dornfeld cannot reasonably be considered to disclose the provision of a return path as defined in independent claim 21.

As Dornfeld fails to teach each and every element of the claimed invention, the Applicant respectfully submits that independent claim 21 is patentable under 35 U.S.C. § 102(e) over Dornfeld. Further, dependent claims 22-23 and 43-45, each of which directly depends from independent claim 21 are submitted to be patentable under 35 U.S.C. § 102(e) over Dornfeld for the reasons set forth above. Accordingly, the Applicant respectfully requests the Examiner to withdraw the 35 U.S.C. § 102(e) rejections for claims 22-23 and 43-45.

Conclusion

In view of the foregoing, the Applicant respectfully submits that all the pending claims 21-23 and 40-45 and newly added claims 46-47 are in condition for allowance. Accordingly, a Notice of Allowance is respectfully requested. If the Examiner has any questions concerning the present amendment, the Examiner is requested to contact the undersigned at (650) 428-0313.

Respectfully submitted,
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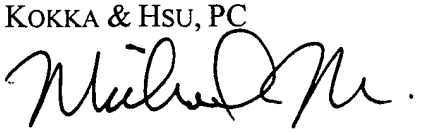

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